

port connected to said low-pressure side, and a pilot port, means operable in said pressure-relief valve whereby the pressure at said inlet port of said pressure-relief valve is determined by the pressure at its said pilot port; a pressure-control valve having an outlet side connected to said low-pressure side and an inlet side and having means operable to maintain a first predetermined pressure differential between said inlet and outlet sides in an injecting mode and to maintain a second predetermined pressure differential between said inlet and outlet sides in a clamping mode; and function-control means including a valve having a first connection coupled to said inlet side and second and third connections each coupled to a respective one of said pilot ports and operable between a filling position connecting said pilot port of said pressure-relief valve to said pressure-control valve and an injecting/holding position connecting said pilot port of said pressure-reducing valve to said pressure-control valve.

2. The system defined in claim 1, further comprising a cut-off valve between said outlet port of said pressure-reducing valve and said chamber, said cut-off valve being closable to block fluid flow from said pressure-reducing valve to said chamber and openable to permit such flow.

3. The system defined in claim 2, further comprising a second pressure-reducing valve connected in series with said cut-off valve between said outlet port of said pressure-reducing valve and said chamber.

4. The system defined in claim 3, further comprising a shunt valve connected across said second pressure-reducing valve, said shunt valve being openable to bypass said cut-off valve.

5. The system defined in claim 1, further comprising a shunt valve connected across said pressure-relief valve, said shunt valve being openable to bypass said pressure-relief valve.

6. The system defined in claim 1, further comprising a program means connected to said function-control means and to said pressure-control valve for operating said function-control means to connect said pilot port of said pressure-reducing valve to said pressure-control valve and thereupon switching same from said injecting position to said holding position after a predetermined interval.

7. The system defined in claim 6, further comprising a cut-off valve connected between said outlet port of said pressure-reducing valve and said chamber, said cut-off valve being openable to permit fluid flow from said pressure-reducing valve to said chamber and closable to block said flow, said program means being con-

nected to said cut-off valve to close same on connection of said pressure-control valve through said function-control means to said pressure-relief valve.

8. In combination with an injection-molding machine having a drive ram with a pressurizable chamber and with a source of fluid under pressure having a high-pressure side and a low-pressure side, a control system comprising: a pressure-reducing valve having an inlet port connected to said high-pressure side, an outlet port, and a pilot port pressurizable to control the pressure at said outlet port; a cut-off valve between said outlet port and said chamber openable for fluid flow therebetween and closable to block such flow; a throttle between said cut-off valve and said pressure-reducing valve; a pressure-relief valve having an inlet port connected to said chamber, an outlet port connected to said low-pressure side, and a pilot port pressurizable to control the pressure differential across said inlet and outlet ports of said pressure-relief valve; a pressure-control valve having an outlet side connected to said low-pressure side and an inlet side and openable to maintain a first predetermined pressure differential between said inlet and outlet sides in an injecting mode and to maintain a second predetermined pressure differential between said inlet and outlet sides in a clamping mode; a check valve having one side connected to said pilot port of said pressure-reducing valve and another side connected to said pilot port of said pressure-relief valve and for fluid flow only from the former to the latter; and a function-control valve having a first connection coupled to said inlet side and second and third connections each coupled to a respective one of said pilot ports and operable between a filling position connecting said pilot port of said pressure-relief valve to said pressure-control valve and an injecting/holding position connecting said pilot port of said pressure-reducing valve to said pressure-control valve.

9. The combination defined in claim 8 wherein said pressure-relief valve and said pressure-control valve each have a housing and a piston subdividing same into a pair of compartments one of which has the respective pilot port and the other of which has the other ports of the respective valve, each piston being formed with a small-diameter orifice permitting limited fluid flow between the respective compartments.

10. The combination defined in claim 8 wherein said function-control valve is a four-way valve having a port constituting a fourth connection and unable to communicate with any of said first, second, or third connections.

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